

COMMENTS ON THE PROPOSED DESIGNATION OF A LECTOTYPE FOR
ASTERIAS NODOSA LINNAEUS, 1758, AND ADDITION OF THE
 GENERIC NAME *PROTOREASTER* DÖDERLEIN, 1916, TO THE OFFICIAL
 LIST. Z.N.(S.) 1493.

(see volume 19, pages 174–176)

By W. I. Follett and Lillian J. Dempster (*California Academy of Sciences,
 San Francisco, Calif., U.S.A.*)

The specimen represented by pl. 3, fig. 3, of Linck, 1733 (*De Stellis marinis*), which Miss Clark has proposed as the lectotype of *Asterias nodosa* Linnaeus, 1758 (the type-species of the genus *Protoreaster* Döderlein, 1916), was cited by Schröter, 1782 (*Musei Gottwaldiani testaceorum* : 58) as referable to the genus *Pentaceros* Linck. If Schröter's citation of the name *Pentaceros* rendered that name available, the generic name *Protoreaster* Döderlein, 1916 (which Miss Clark seeks to conserve), would be a junior synonym of *Pentaceros* Schröter, 1782.

We do not regard *Pentaceros* Schröter, 1782, as an available name : it was published in a work in which the author did not consistently apply the principles of binominal nomenclature.

In 1908 Fisher (*Smithson. Misc. Coll.* 52 : 93) stated : "Schröter, in 1782 (*Musei Gottwaldiani Testaceorum, Stellarum marinum*, etc., Nürnberg, 58), used *Pentaceros*, but he is not a consistent binomialist, and his 'generic' names are not tenable".

Nevertheless, a number of authors have since used the name *Pentaceros* for a genus of starfishes : Brown, 1910 (*Proc. roy. phys. Soc. Edinburgh* 18 : 27, 32–34) ; Simpson and Brown (*op. cit.* : 47, 51–53) ; Koehler, 1910 (*Echinoderma of the Indian Museum*, part 6, *Asterioidea* (2) : 91–110) ; Tennent and Keiller, 1911 (*Carnegie Inst. Washington Publ.* 132 : 113) ; Clark and Twitchell, 1915 (*U.S. Geol. Survey Monogr.* 54 : 42, 237) ; Gravely, 1927 (*Bull. Madras Government Mus.* 1 : 169) ; Huckle and Voigt, 1929 (*Z. deutsch. geol. Ges.* 81 : 160) ; Edmondson, 1935 (*Bernice P. Bishop Mus. occ. Pap.* 11(8) : 18) ; Cadenat, 1938 (*Rev. Trav. Pêches marit. Paris* 11 : 352).

Jordan and Evermann, 1917 (*Genera of Fishes* : 126) stated : "It is evident that *Pentaceros* has no standing in nomenclature prior to its use by Cuvier and Valenciennes [for a genus of fishes], unless given it by Schröter in 1782, a matter which awaits decision". [Emphasis added.]

Smith, 1951 (*Ann. Mag. nat. Hist.* (12) 4 : 876) stated : "*Pentaceros* was first used by Schultz [misprint for Schulze] in 1760 for a Star-fish, but this is ruled as inadmissible. This name was again used in the same respect by Schröter in 1782, but objections have been raised against the validity of his nomenclature. The matter is apparently still open, but should be settled since it has repercussions in two fields". [Emphasis added.]

Schröter used the name *Pentaceros* only in the following paragraph (p. 58) : "Fig. III. ist auf der Seite des Rückens vorgestellt, und kommt vor im Link [sic] *de stellis mar.* tab. III. fig. 3, auf der Rückenseite, und Tab. II. fig. 3, auf der Seite der Mündung. S. 21. 22. stehet er unter dem Geschlecht *Pentaceros*, der fünfhörnige Stern, und heisst *Pentaceros gibbus turritus pluribus velut turriculis munitus*. Die Seepastete Rumph holländ. p. 39. Beim Linné ist er ed. XII. p. 1100. Gen. 298. sp. 7. *Asterias nodosa* oder *Asterias stellata, radii convexis longitudinaliter elevatis muricatis* . . .".

Schröter's use of polynominal Latin names in the foregoing paragraph and elsewhere in the same work demonstrates that he did not consistently apply the principles of binominal nomenclature in that work. The name *Pentaceros*, as published in that work, therefore does not fulfil the requirement of availability that is specified by Article 11(c) of the International Code of Zoological Nomenclature.

Furthermore, Schröter's citation of *Pentaceros* from a prelinnean author is a case similar to that considered in Opinion 5, in which the International Commission on Zoological Nomenclature ruled that a prelinnean name, ineligible because of its publication prior to 1758, did not become eligible by being cited, without adoption or acceptance, after 1757.

We therefore suggest that Miss Clark's application include a request that the International Commission on Zoological Nomenclature (1) place the name *Pentaceros* Schröter, 1782 (*Musei Gottwaldiani testaceorum* : 58) on the Official Index of Rejected and Invalid Generic Names in Zoology, and (2) place the work Schröter (J. S.), 1782, *Musei Gottwaldiani testaceorum, stellarum marinarum et coralliorum quae supersunt tabulae*, on the Official Index of Rejected and Invalid Works in Zoology.

In making this suggestion, we are prompted by the necessity of determining whether the generic name *Pentaceros* Cuvier in Cuvier and Valenciennes, 1829 (Pisces) is valid.

By H. Barraclough Fell (*Victoria University of Wellington, New Zealand*)

The application which was prepared in consultation with European authorities on the Asteroidea, and has as its aim the stabilization of the existing nomenclature as customarily employed, would appear to achieve this aim. I have examined the figures referred to in a copy of *Johannis Henrici Linckii : De Stellis Marinis*, Lipsiae, 1733, and the reference made to them in the British Museum offset printing of the *Systema Naturae*, ed. 10. In my opinion the application is deserving of the strongest possible support.